

patient years at risk, hospital days and costs of hospitalization per patient per year per modality, annual growth rate of end stage renal disease (ESRD), and years to reach new modality shares. The study used data from the monthly clinical report (MCR) for the year 2005 in the network of renal clinics of Renal Therapy Services (RTS) Colombia. The entire hospitalization events were included. Cost data were obtained from a renal unit from the RTS network and imputed on a daily basis. **RESULTS:** A total of 7441 patients were under RRT in the RTS network in Colombia in 2005. 57.2% were on HD and 42.8% on PD. For patients on PD, 79.5% were on continuous ambulatory PD (CAPD) and 20.5% on automated PD (APD). The average daily costs of a hospital admission per patient in 2006 US dollars were estimated to be \$334 for HD, \$175 for CAPD, and \$206 for APD. The annual growth rate of ESRD was estimated to be 8%. A hypothesized shift of 5% of the patients in treatment modality from HD to PD in a five-year period represented a cumulative net savings of \$2,332,423 in total hospital costs. **CONCLUSION:** This simulation model analysis indicates that an increased use of PD results in substantial savings in the hospital costs of patients in RRT, and in a significant impact on the budget of the health care system.

PUK7

GENERIC SUBSTITUTION OF TACROLIMUS AFTER RENAL TRANSPLANTATION: A DECISION-MAKING MODEL TO WEIGH RISKS AND BENEFITS

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OBJECTIVES: Brazil has a very developed renal transplantation program, financed entirely by the government. Tacrolimus is one of the most used drugs to prevent graft rejection. A clinical study, presented during the 2006 Mexican National Transplantation Congress, raised some concerns about non-interchangeable generic substitution of tacrolimus. We developed a decision-making model that will allow the user to weigh risks and benefits of substituting tacrolimus by a generic formulation. **METHODS:** We developed a Markov model, using Monte Carlo simulation, describing the clinical history of post-renal transplantation patients over a 5-year period. The model estimates clinical outcomes, rejection episodes, graft loss, patients returning to dialysis, re-transplantation, number of deaths, costs and cost-effectiveness (in terms of rejections avoided) of immunosuppressive treatment with original versus generic tacrolimus. Transition probabilities were derived from the US Renal Data System, the Brazilian renal transplantation program, the above-mentioned Mexican study and international medical literature. Local management of each health state was based on a Delphi panel and government program costs were applied. A 3% annual discount rate was used. Sensitivity analyses were performed for key parameters. **RESULTS:** Over a 5-year horizon and simulating 10,000 patients in the base case scenario, original versus generic tacrolimus generated fewer rejections (1005), fewer patients needing dialysis (609), fewer re-transplantations (114), fewer deaths (164), and was thus able to reduce (avoid) total costs by 2%. A cost-effectiveness curve was derived that illustrates the trade-off between key parameters, such as rejection rate and treatment cost. **CONCLUSION:** Lower treatment costs may be offset by the impact of clinical outcomes if the generic formulation of tacrolimus were not therapeutically equivalent to the original. We developed a decision-analytic model resulting in cost-effectiveness curves that illustrate the trade-off between these risks and benefits, and will enable an informed decision-making process regarding generic substitution of tacrolimus.

PUK8

COST EFFECTIVENESS OF ICODEXTRINE-BASED SOLUTIONS IN END STAGE RENAL DISEASE PATIENTS UNDERGOING PERITONEAL DIALYSIS THERAPY

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OBJECTIVES: Icodextrin-based solutions have potential clinical advantages over glucose-based solutions in fluid and metabolic management of diabetic end state renal disease (ESRD) patients undergoing peritoneal dialysis (PD). The cost-effectiveness (CE) of icodextrin-based solutions compared to glucose-based solutions is not known. The purpose of the present study is to estimate CE of icodextrin-based solution for peritoneal dialysis in diabetic ESRD patients with high average and high peritoneal transport. **METHODS:** A decision analytic model was developed to estimate cost per life year gained of icodextrin-based solutions. Clinical (improvement in peritoneal ultrafiltration, reduction of extracellular fluid volume, metabolic, blood pressure control, edema, therapy related complications, and mortality) and resource utilization (all-cause hospital admissions and lengths of stay) data were obtained from a 12 month, multicenter, open-label, randomized, clinical trial conducted in the Mexican Institute of Social Security (IMSS) in Mexico City where patients were assigned in one of two groups, dextrose (GLU, n = 29) or icodextrin (ICO = 30). Cost data, expressed in 2006 US dollar, were obtained from financial information database in IMSS. Costs related to adverse events, drugs, hospitalizations, medical care, intensive care unit and surgery were included. Univariate and probabilistic sensitivity analyses were performed using a Monte Carlo simulation method. **RESULTS:** Clinical data indicated that icodextrin-based solution was a significant aid for the management of this population. Patients in ICO group had lower hospital length of stay (on average 3 day) compared to GLU group. The total per patient per year cost of ICO group was \$13,953, while that for GLU group was \$16,788. Expected cost-effectiveness ratios were \$14,209 per life year gained and \$17,716 per life year gained for ICO and GLU, respectively (p < 0.0001). ICO group was also shown to be dominant in 100% of cases. **CONCLUSION:** Icodextrin-based solution was cost-effective in treating diabetic ESRD patients with high average and high peritoneal transport undergoing PD treatment.

PUK9

A RETROSPECTIVE MATCHED COHORT STUDY OF THE BURDEN OF SECONDARY HYPERPARATHYROIDISM (SHPT) IN PREDIALYSIS PATIENTS WITHOUT VITAMIN D RECEPTOR (VDR) ACTIVATOR THERAPY

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OBJECTIVES: Secondary hyperparathyroidism (SHPT) can lead to significant morbidity, mortality, & health care resource utilization in chronic kidney disease (CKD) Stage 5 patients receiving hemodialysis. The objective of this study was to determine if predialysis patients with SHPT experience similar clinical and